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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,902	03/28/2001	Dominic J. Gasbarro	219.39659X00	2396

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Rob D. Anderson
C/O BLAKELY, SOKOLOFF, TAYLOR & ZAPMAN LLP
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025

EXAMINER

FAROOQ, MOHAMMAD O

ART UNIT PAPER NUMBER

2182

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,902

Applicant(s)

GASBARRO ET AL.

Examiner

Mohammad O. Farooq

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 4 and 6-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/21/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beukema et al. U.S. Pat. No. 6,601,148 B2 in view of Chuang, U.S. Pat. No. 5,371,864.

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2. As to claim 1, Beukema et al. teach a host-fabric adapter, comprising:

At least one Micro-Engine (inherent) arranged to establish connections and support data transfer operations, via a switched fabric, in response to work requests that cause instructions in a form of work queue elements "WQEs" posted from a host system for said data transfer operations (abstract; col. 6, lines 12-28; fig. 1).

Beukema et al. do not teach mechanism arranged to determine the starting address of each work queue element. Chuang teaches mechanism arranged to determine the starting address of each work queue element (abstract; col. 8, lines 21-26). However, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Beukema et al. and Chuang because that would provide processing of variable length instructions in a system (col. 1, lines 36-40).

3. As to claim 2, Beukema et al. teach host-fabric adapter further comprising a transport engine which contains a plurality of work queue pairs in which work requests in form of work queue elements are posted to describe data transfer operations and locations of data to be moved for processing and/or transportation via said switched fabric (see fig. 3 and 4).

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4. As to claim 3, Beukema et al. teach host-fabric adapter wherein said work queue pairs each comprises:

A send queue (see fig. 4) utilized as an "initiator" which requests normal message sends to remote Virtual Interfaces of a remote system, remote direct memory access reads which request messages to be read from specific memory locations of said remote system, via said switched fabric, and remote direct memory access writes which request messages to be written onto specific memory locations of said remote system, via said switched fabric; and a receive queue (see fig. 4) utilized as a "responder" which receives requests for messages from normal sends RDMA reads and RDMA writes from said remote system, via said switched fabric (col. 6, line 54 – col. 7, line 27; fig. 4).

5. As to claim 5, Beukema et al. teach host-fabric further comprising:

A local bus interface (via HCA or TCA; fig. 1) arranged to interface a local bus responsible for supporting system accessible context connections and channel operations, and turning signal data into appropriate forms for said Micro-Engine to process work requests for said data transfer operations; and a QP context memory arranged to store QP context information needed for said Micro-Engine to process work requests for data transfer operations (see items 302, 304...310; fig. 3).

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Allowable Subject Matter


6. Claims 12-20 are allowed.
7. Claims 4 and 6-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad O. Farooq whose telephone number is (571) 272-4144. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JEFFREY GAFFIN
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 6100

Mohammad O. Farooq
November 9, 2004